

Figure 1

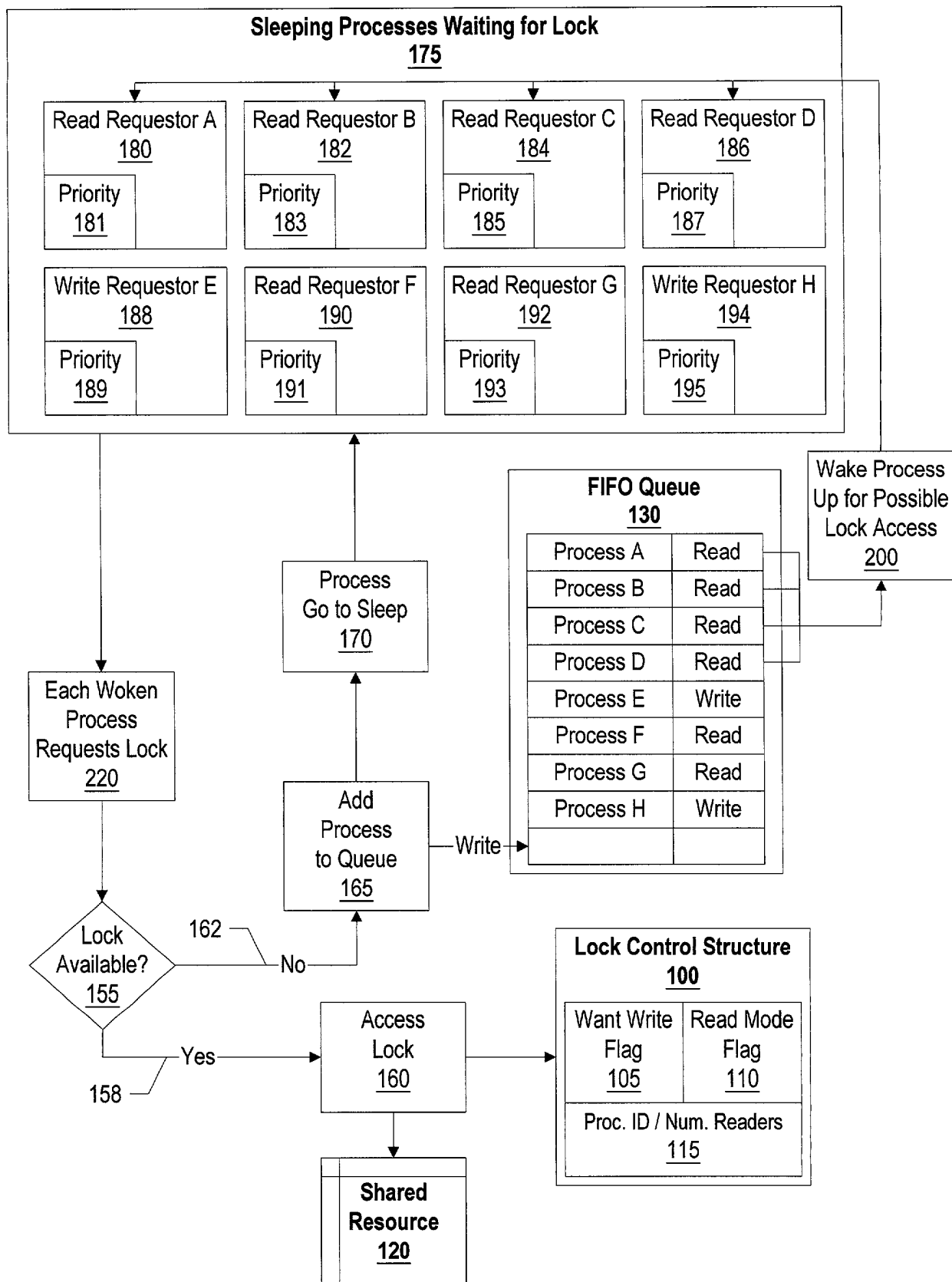


Figure 2

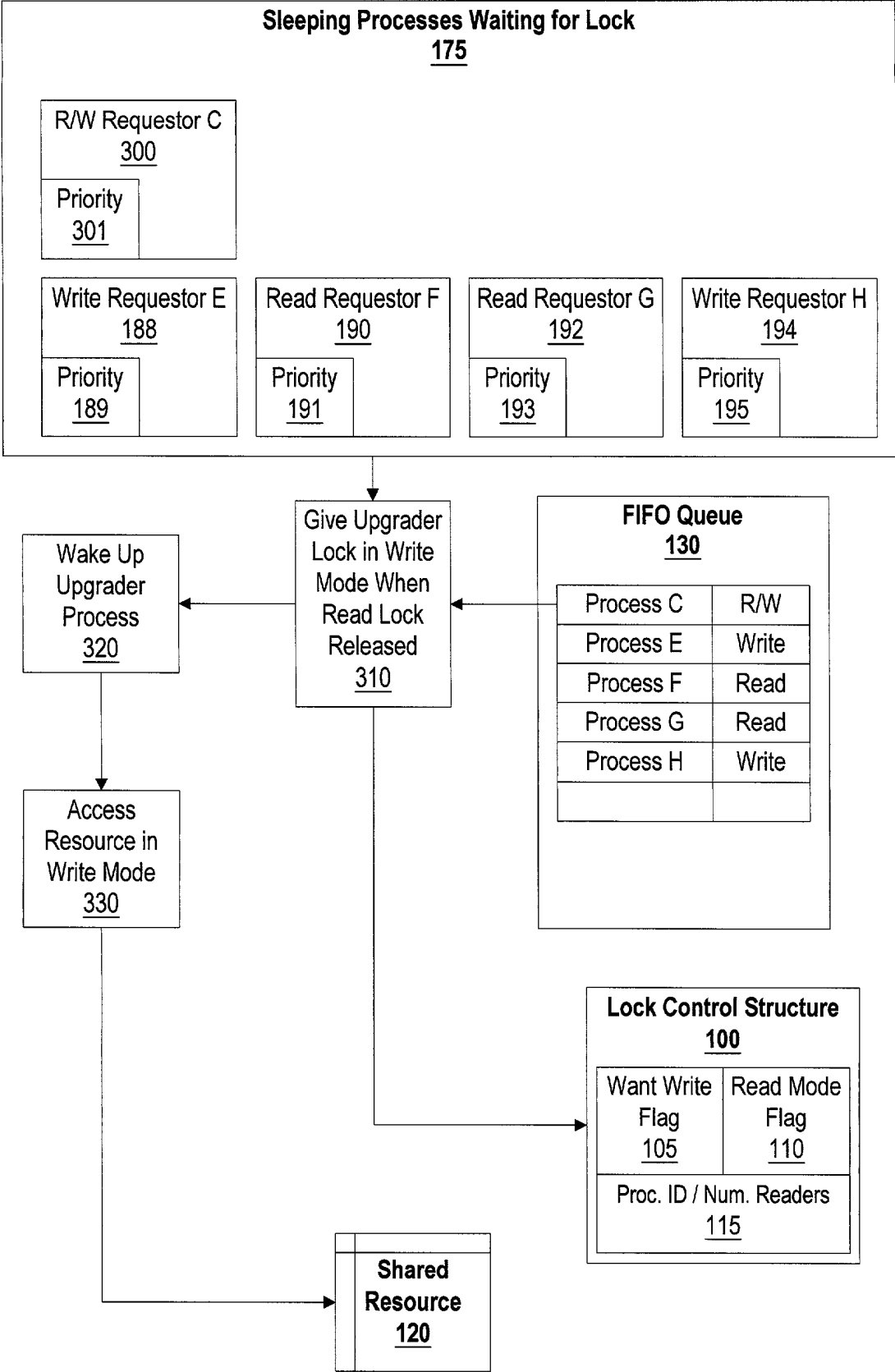


Figure 3

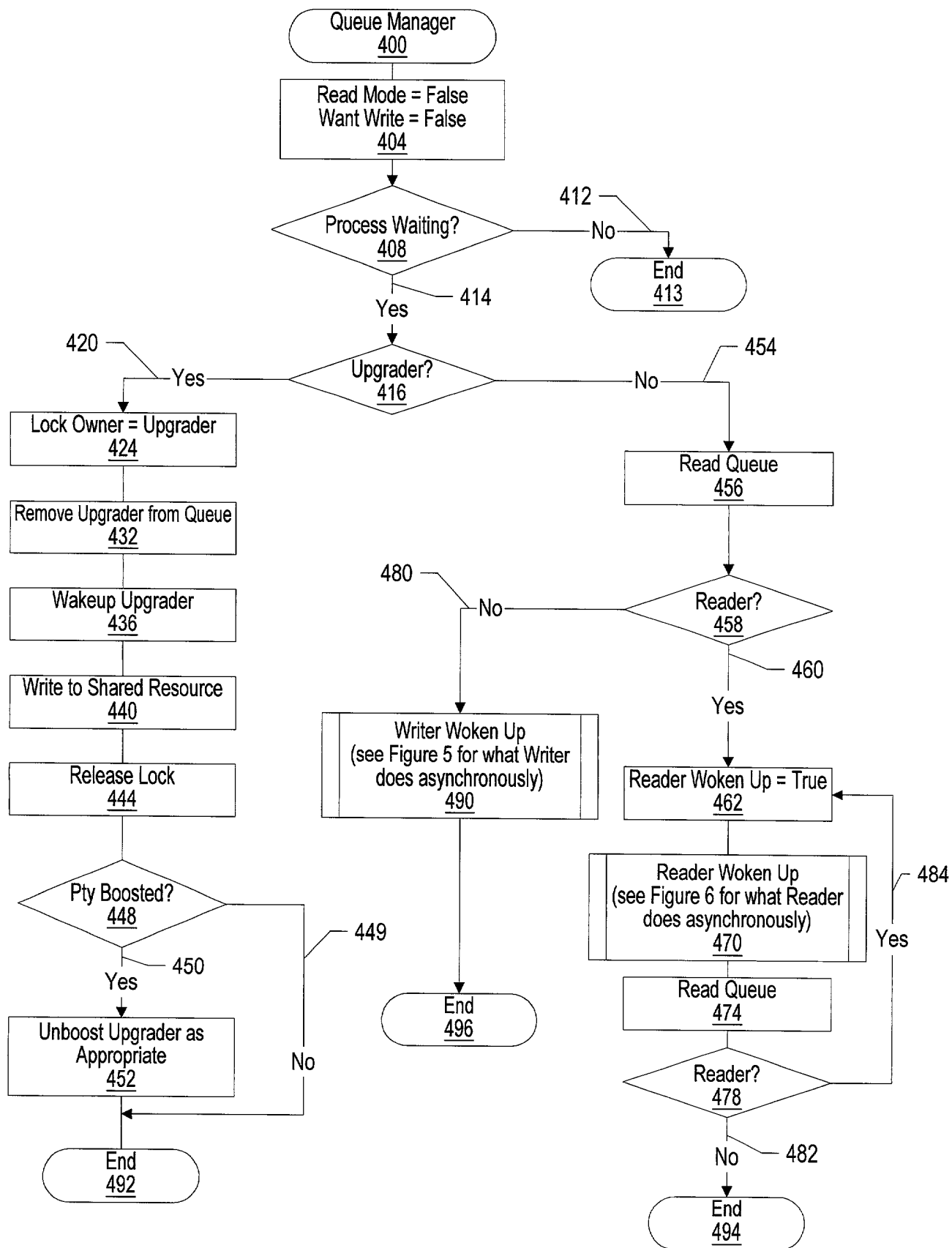


Figure 4

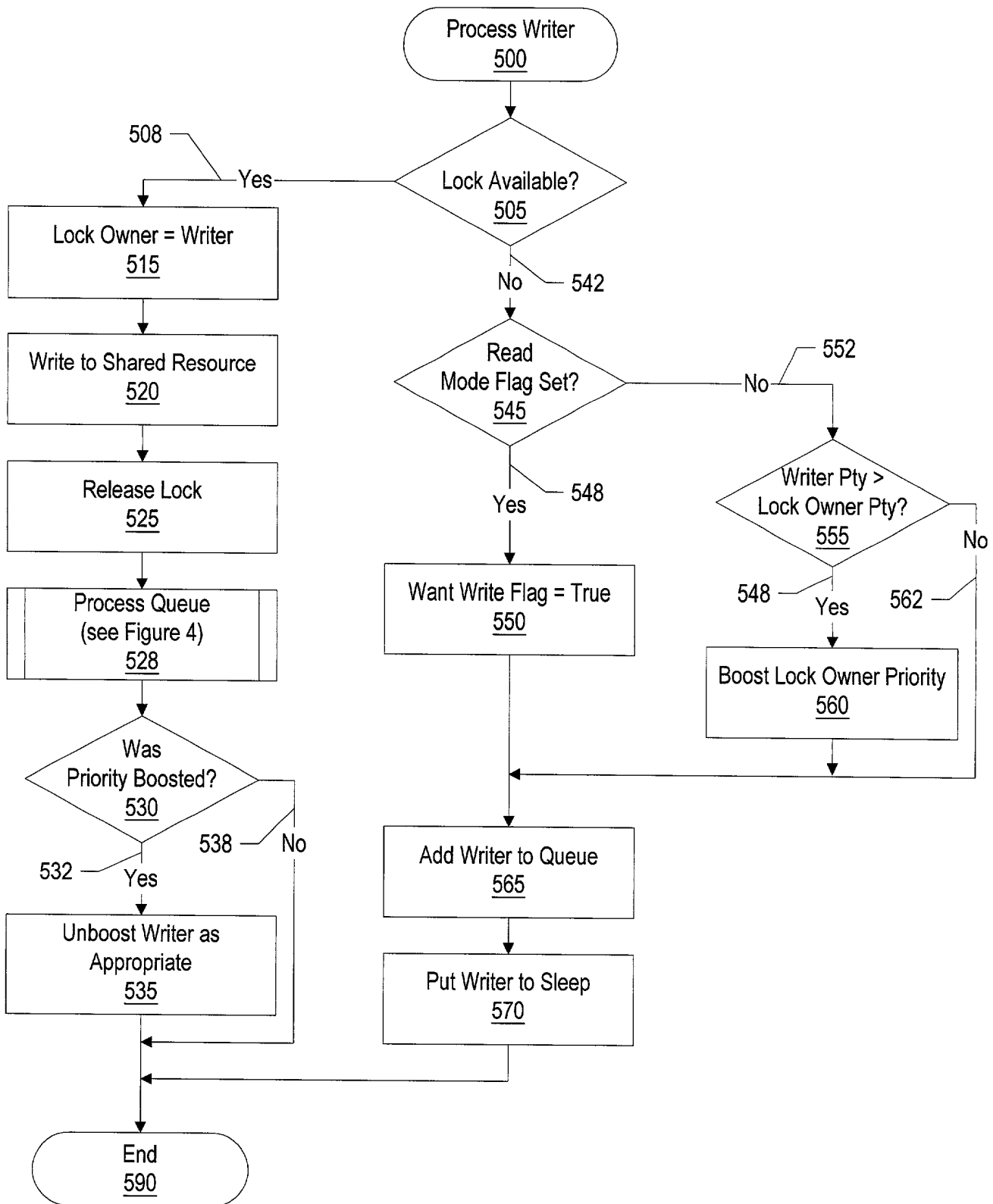


Figure 5

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graph TD
    Start([Process Reader 600]) --> 606{Lock Available? 604}
    606 -- Yes --> 608[Read Mode Flag = True 608]
    606 -- No --> 614{Lock in Read Mode? 616}
    608 --> 612[Num Readers = 1 612]
    612 --> 644[Speed Up Reader 644]
    644 --> 648[Read Shared Resource 648]
    648 --> 652{Upgrade? 652}
    652 -- Yes --> 654[Process Upgrader see Figure 7 658]
    654 --> 662([End 662])
    652 -- No --> 666[Release Lock Decrement Num Readers 668]
    666 --> 672[Slow Down Reader As Appropriate 672]
    672 --> 676{Num Readers = 0? 676}
    676 -- Yes --> 678[Process Queue see Figure 4 684]
    678 --> 688([End 688])
    676 -- No --> 692([End 696])
    614 --> 630{Reader Woken Up? 632}
    630 -- Yes --> 635[Increment Num Readers 640]
    635 --> 644
    630 -- No --> 634{Want Write Set? 636}
    634 -- Yes --> 639[Add Reader to Queue 620]
    639 --> 624[Put Reader to Sleep 624]
    624 --> 628([End 628])
    634 -- No --> 638[Add Reader to Queue 620]
    638 --> 640
  
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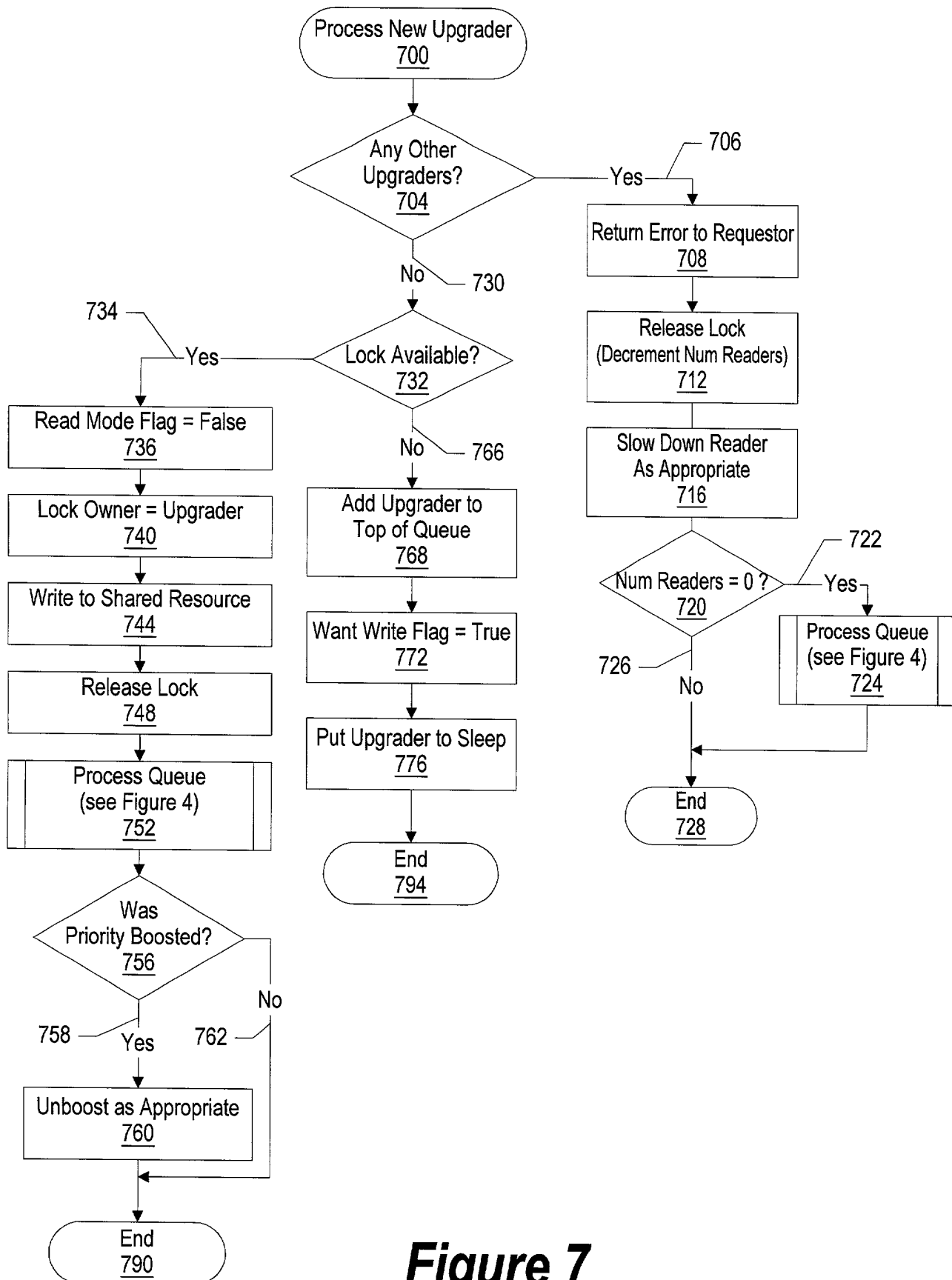


Figure 7

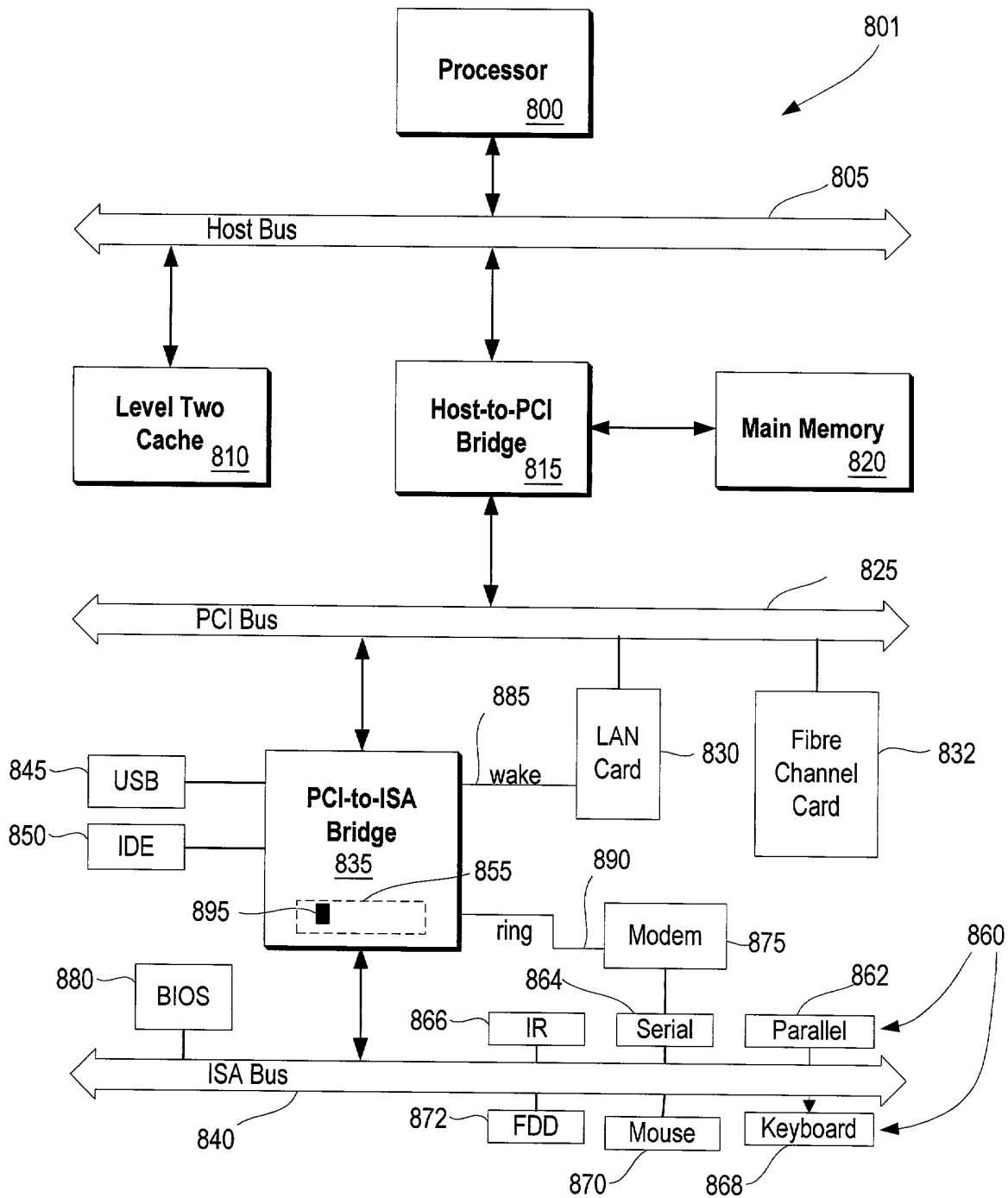


Figure 8